

WHAT IS CLAIMED IS:

1. A transformer isolated gate driver electrically connected to a power switch for realizing the driving of said power switch , comprising:

- a PWM driver for producing a PWM signal;
- a transformer electrically connected to said PWM driver;
- an input capacitor electrically connected to a primary side of said transformer in series;
- an output capacitor electrically connected to a secondary side of said transformer in series;
- an output diode electrically connected to two output terminals of said transformer isolated gate driver in parallel; and
- a active switch electrically connected to said output capacitor in series and having an input electrode electrically connected to a first terminal of said secondary side of said transformer, a first electrode electrically connected to a second terminal of said secondary side of said transformer, and a second electrode electrically connected to one of said two output terminals;

wherein said secondary side of said transformer, said output capacitor, said output diode, and said active switch are electrically connected in series, and when said PWM signal is disappeared, by discharging a plurality of charges across an equivalent input capacitor of said power switch through said secondary side of said transformer, said output capacitor, and a body diode of said active switch, a mis-triggering signal on said power switch will no more appear.

2. The transformer isolated gate driver according to Claim 1, wherein two polarities of said transformer are the same.

3. The transformer isolated gate driver according to Claim 1, wherein two polarities of said transformer are reversed.
4. The transformer isolated gate driver according to Claim 1, wherein said power switch is a MOSFET.
5. The transformer isolated gate driver according to Claim 1, wherein said active switch is a small power MOSFET and said input electrode, said first electrode, and said second electrode of said active switch are a gate, a source, and a drain of said small power MOSFET respectively.
6. The transformer isolated gate driver according to Claim 1, 2 or 3, wherein said output capacitor is electrically connected between a cathode of said output diode and said input electrode of said active switch in series.
7. The transformer isolated gate driver according to Claim 1, 2 or 3, wherein said output capacitor is electrically connected between an anode of said output diode and said second electrode of said active switch in series.
8. The transformer isolated gate driver according to Claims 1, 2 or 3, wherein one selected from a group consisting of said input capacitor, said output capacitor, and said two output terminals of said transformer isolated gate driver is electrically connected to a resistor in parallel selectively.
9. The transformer isolated gate driver according to Claims 1, 2 or 3 further comprises an input diode electrically connected to said input capacitor in parallel, wherein an anode of said input diode is connected to a first end of said input capacitor connecting with said transformer, and a

cathode of said input diode is connected to a second end of said input capacitor.

10. A transformer isolated circuit in which said transformer isolated circuit is electrically connected to a PWM driver and a power switch for realizing the driving of said power switch by an isolation of PWM technique, comprising:

- a transformer;

- an input capacitor electrically connected to a primary winding of said transformer in series;

- an output capacitor electrically connected to a secondary side of said transformer in series;

- an output diode electrically connected to two output terminals of said transformer isolated gate driver in parallel; and

- a active switch electrically connected to said output capacitor in series and having an input electrode electrically connected to a first terminal of said secondary side of said transformer, a first electrode electrically connected to a second terminal of said secondary side of said transformer, and a second electrode electrically connected to one of said two output terminals;

wherein said secondary side of said transformer, said output capacitor, said output diode, and said active switch are electrically connected in series.

11. The transformer isolated circuit according to Claim 10, wherein two polarities of said first and second windings are the same.

12. The transformer isolated circuit according to Claim 10, wherein two polarities of said first and second windings are reversed.